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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,723	07/11/2002	James Scott Tyler	NOR-933A	8221
37172	7590	03/24/2004	EXAMINER	
WOOD, HERRON & EVANS, LLP (NORDSON) 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			KACKAR, RAM N	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,723

Applicant(s)

TYLER, JAMES SCOTT

Examiner

Ram N Kackar

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 20-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-43 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-22-2002
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1-19, drawn to an apparatus for plasma treatment of a work piece

Group 2, claim(s) 20- 43, drawn to a method of plasma treatment

2. The inventions listed as Groups 1-2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The technical feature of hinged access member in only group 1 and impedance matching in only group 2 are not shared by the two groups.

3. During a telephone conversation with Kevin Rooney on 3/15/2004 a provisional election was made with traverse to prosecute the invention of Group 1, claim 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-43 are withdrawn from further consideration by the examiner, as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

4 The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instance the claim “adjustable in width” appears to be a mechanism which allows positioning work pieces of varying width during use. This is not clear from the description and/or drawings.

Claim Rejections - 35 USC § 102

5 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6 Claims 1-2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekine et al (US 5660744).

Sekine et al disclose a vacuum chamber with a vacuum pump and a vacuum baffle (Fig 1 or Fig 6 and Col 19 lines 13-29 and Col 21 lines 55-60), gas supply (4), work piece holding portion (2), plasma excitation source (5), a powered electrode between vacuum baffle and work piece holding portion (2) and a ground electrode positioned on an opposite side (7).

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7 Claims 1-2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al (JP 03002377).

Matsuda et al disclose a vacuum chamber with a vacuum pump and a vacuum baffle (Fig 2-16), gas supply (8 and 9), work piece holding portion (5), plasma excitation source (12), a powered electrode between vacuum baffle and work piece holding portion (13) and a ground electrode positioned on an opposite side (Fig 2).

8 Claims 11-13 and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Arami et al (US6035804).

Arami et al disclose a vacuum chamber with a base (Fig 4-4), an access member (12), which can be opened or closed (Fig 3 and 4), work piece holding portion (24), sealing member (7), gas supply and apertures for gas distribution (Fig 8-104), electrode assembly (24 and 9) plasma excitation source, vacuum source (Col 9 lines 1-10) and a hinge coupling (12).

Claim Rejections - 35 USC § 103

9 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine et al (US 5660744) in view of Moore et al (US 5710407).

Sekine et al disclose a plasma vacuum chamber for processing of work pieces.

Sekine et al do not disclose an adjustable mechanism for varying width work pieces.

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Moore et al disclose processing work pieces of varying sizes on single susceptor(Abstract) and Fig 14F and 14G.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to have used susceptor adjustable for varying size of a hinge to conveniently open and close the lid.

11 Claims 4, 6-7, 9-10, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine et al (US 5660744) in view of Arami et al (US6035804).

Sekine et al disclose a vacuum chamber with a vacuum pump and a vacuum baffle (Fig 1 or Fig 6 and Col 19 lines 13-29 and Col 21 lines 55-60), gas supply (4), work piece holding portion (2), plasma excitation source (5), a powered electrode between vacuum baffle and work piece holding portion (2), a ground electrode positioned on an opposite side (7) and a lid (7).

Sekine et al do not disclose a hinge for opening or closing the lid. However, a hinge to allow a lid to open/close is conventional and common.

Arami et al disclose a plasma chamber with a base (Fig 4-4), lid (12) and a hinge coupling (12).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to have used a hinge to conveniently open and close the lid.

12 Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine et al (US 5660744) in view of Koshiishi et al (US 5919332).

Sekine et al disclose a vacuum chamber with a vacuum pump and a vacuum baffle (Fig 1 or Fig 6 and Col 19 lines 13-29 and Col 21 lines 55-60).

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Sekine et al do not disclose a vacuum baffle, which comprises an electrically insulating material.

Koshiishi et al disclose a vacuum baffle, which comprises insulating material (Col 16 lines 36-40).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to have the baffle plate insulated to confine plasma towards the processing area.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram N Kackar whose telephone number is 571 272 1436. The examiner can normally be reached on M-F 8:00 A.M to 5:P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 571 272 1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RK


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